

Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Currently amended) A bicompartiment bag adapted to prepare a liquid solution, comprising an assembly of two strong flexible outer sheets and a flexible inner sheet ~~that divides~~ oriented vertically relative to a top portion and a bottom portion of the bag, the inner sheet dividing an interior of the bag into a first chamber that is at least partially filled with a powdered solute and a second chamber and that has a screen portion located only at a distal end thereof at a the bottom portion of the bag, the two outer sheets and the inner sheet being watertightly joined at a periphery thereof, one of the two outer sheets having a first aperture located therein and an access bushing disposed in the first aperture, the inner sheet having a second aperture located therein that is in communication with the bushing and the inner sheet being affixed at a periphery of the second aperture to a plane of a bushing end that projects into the bag, the bushing having a first opening therein that provides communication between a solvent inlet line and the first chamber, and the bushing having a second opening therein that provides communication between the second chamber and a solution discharge line.

2. (Previously presented) The bag according to claim 1, wherein the plane of the end of the bushing that projects into the bag is annular.

3. (Canceled)

4. (Previously presented) The bag according to claim 1, wherein said powdered solute is sodium bicarbonate.

5. (Previously presented) The bag according to claim 1, wherein the second chamber includes an unattached woven or injected thermoplastic material layer having a recessed portion adjacent the access bushing, the layer extending from the access bushing to a bottom portion of the second chamber.

6. (Previously presented) The bag according to claim 1, wherein the bushing has an annular body, a central axial portion, a discoid base having a base diameter that is larger than a diameter of the first aperture and a diameter of the second aperture, and a radial tube in the discoid base that communicates the central axial portion with an exterior of the bushing.

7. (Previously presented) The bag according to claim 6, further comprising a cover that attaches to the bushing by a snap fit to provide an air-tight connection to the bag.

8. (Previously presented) The bag according to claim 7, wherein an interior of the bushing includes a connecting portion and the cover includes a complementary connecting portion, the bushing connecting portion and the cover connecting portion cooperating so as to provide the attachment of the cover to the bushing, and wherein the cover includes an axial cylindrical tube with a bottom end that is initially sealed by a valve, and a coaxial cylinder that surrounds and that extends higher than the axial cylindrical tube, the coaxial cylinder having in a bottom portion thereof an orifice that projects radially outward toward a contour of the cover and that terminates in a peripheral groove at the contour.

9. (Previously presented) The bag according to claim 8, wherein said valve includes a thin sheet having lesser strength lines disposed in a cross-shaped configuration and grooves engraved in a quadrangular configuration across a circular section thereof, the grooves having a depth that is approximately one half of a thickness of the thin sheet.

10. (Previously presented) The bag according to claim 1, wherein the screen portion includes a filter to retain undissolved powdered solute in the first chamber.

11. (Previously presented) The bag according to claim 7, wherein the cover and the bushing each have a threaded portion that cooperate to provide the snap-fit connection.

12. (Withdrawn) A process for manufacturing the bag according to claim 1 characterized in that it comprises the following steps: Continually circulating three laminar bands (1, 2, 7) of a suitable width and thickness superimposed on three levels, forming a first bore (3) in one of the outer bands (1) and a second bore (8) and a screen part (9) in the interposed band (7), positioning and welding a bushing (4) into the first (3) and onto the second (8) bore, perimetral welding and final cutting of the three bands.

13. (Withdrawn) A bag-manufacturing process according to claim 12 characterized in that a drain segment (5) is inserting between the two bands (1, 7) with the first (3) and second (8) bore before the perimetral welding step.

14. (Withdrawn) A bag-manufacturing process according to claim 12 characterized in that the bag is quality tested after the perimetral welding and final cutting step.

15. (Withdrawn) A bag-manufacturing process according to claim 12 characterized in that after the perimetral welding step the first chamber of the bag being defined by the outer band (2) having no bore and the interposed band (7) is at least partially filled with a powdered solute though an opening (13) in the bushing (4) and that the opening in the bushing is closed with a lid (26).

16. (Previously presented) The bag according to claim 9, wherein the valve opens for introduction of the solvent by separation of adjacent portions of the thin sheet along the lesser strength lines and by hinged action of another portion of the thin sheet along the grooves.

17. (Previously presented) The bag according to claim 8, wherein the cover orifice communicates solution from the bushing second opening to the solution discharge line.

18. (Currently amended) A bicompartiment bag adapted to prepare a liquid solution, comprising:

a first flexible outer sheet having a first aperture therein, a second flexible outer sheet, and a first flexible inner sheet having a second aperture therein, the first inner sheet being oriented vertically relative to a top portion and a bottom portion of the bag and dividing an interior of the bag into a first chamber that is at least partially filled with a powdered solute and a second chamber and having a perforated portion located only at a distal end thereof at a the bottom portion of the bag, the outer sheets and the first inner sheet being watertightly joined at a periphery thereof;

a bushing disposed in the first aperture and attached to the first outer sheet at a periphery of the bushing and attached to the first inner sheet at a portion thereof adjacent the second aperture, the bushing having a first flow channel therein that provides fluid communication between a solvent inlet line and the first chamber, and the bushing having a second flow channel therein that provides fluid communication between the second chamber and a solution discharge line; and

a cover inserted in the bushing to provide an air-tight bag connection, the cover having an initially sealed valve therein that is openable so as to provide the fluid communication through the first flow channel.

19. (Previously presented) The bicompartment bag according to claim 18, wherein the cover includes an axial cylindrical tube

with a bottom end that houses the valve, and a coaxial cylinder that surrounds and that extends higher than the axial cylindrical tube, the coaxial cylinder having in a bottom portion thereof an orifice that projects radially outward toward a contour of the cover and that terminates in a peripheral groove at the contour so as to communicate with the bushing second flow channel.

20. (Previously presented) The bicompartment bag according to claim 18, wherein the first chamber is configured to house the solute before introduction of the solvent to the bag, and the perforated portion of the first inner sheet is a screen that retains in the first chamber any undissolved portion of the solute.

21. (Previously presented) A bicompartment bag adapted to prepare a liquid solution, comprising an assembly of two strong flexible outer sheets and a flexible inner sheet that divides an interior of the bag into a first chamber and a second chamber and that has a screen portion located at a distal end thereof at a bottom portion of the bag, the two outer sheets and the inner sheet being watertightly joined at a periphery thereof, one of the two outer sheets having a first aperture located therein and an access bushing disposed in the first aperture, the inner sheet having a second aperture located therein that is in communication with the bushing and the inner sheet being affixed at a periphery

of the second aperture to a plane of a bushing end that projects into the bag, the bushing having a first opening therein that provides communication between a solvent inlet line and the first chamber and having a second opening therein that provides communication between the second chamber and a solution discharge line, the second chamber including an unattached woven or injected thermoplastic material layer having a recessed portion adjacent the access bushing, the layer extending from the access bushing to a bottom portion of the second chamber.

22. (Previously presented) The bag according to claim 1, wherein a remaining portion of the flexible inner sheet other than the screen portion has a construction that prevents the solvent from flowing from the first chamber to the second chamber.